Serial Number: 10/021,541 Filing Date: December 17, 2001

Title: SIR TARGET UPDATE ACCORDING TO CHANNEL CONDITIONS

Assignee: Intel Corporation

# **REMARKS**

In response to the Office Action dated 20 May 2005, the applicants request reconsideration of the above-identified application in view of the following remarks. Claims 1-39 are pending in the application, and are rejected. None of the claims are amended.

# Rejections of Claims Under §102

Claims 1-4, 6-7, 9-14, 17-19, and 21-25 were rejected under 35 USC § 102(e) as being anticipated by Dahlman et al. (U.S. 6,173,162, Dahlman). The applicants respectfully traverse.

Dahlman issued on 9 January 2001, which is less than one year before the filing date of the present application. The applicant does not admit that Dahlman is prior art, and reserves the right to swear behind Dahlman at a later date.

Claim 1 recites a communication apparatus, comprising, among other elements, "a channel estimator to estimate channel parameters for a communication channel based on a signal received from the communication channel," and "a quality measure target generator to generate a quality measure target value for the communication apparatus using channel parameters estimated by said channel estimator." Independent claims 11, 17, and 22 recite similar features.

Dahlman relates to "multiple code channel power control" in a radio system.<sup>1</sup> In Dahlman, a "fast power control loop monitors a reference channel and adjusts transmit power in accordance with an SIR target value." The SIR target value is adjusted based on quality measurements such as bit error rate (BER) and frame error rate (FER).<sup>3</sup>

However, the claimed invention generates a quality measure target value using channel parameters estimated by a channel estimator. The embodiments described in the specification of this application make a clear distinction between channel parameters of a communication channel and error rates. For example, the specification states:

The channel estimator 38 may estimate any form of channel information that may be needed by the SIR target generator 44 to determine an SIR target value. This may include, for example, the number of paths in the channel, the path strengths, mobile velocity, path fading rates, symbol

<sup>&</sup>lt;sup>1</sup> Dahlman, Title.

<sup>&</sup>lt;sup>2</sup> Dahlman, Abstract.

<sup>&</sup>lt;sup>3</sup> Dahlman, column 6, lines 8-25 and 45-52.

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energy variances, variances between symbols of different blocks, variance of total block energy, and/or others.<sup>4</sup>

The Specification distinguishes the information from the channel estimator 38 with performance information that includes error rates.<sup>5</sup> The Specification further distinguishes the information from the channel estimator 38 from error rates in the following passage:

"the SIR target generator 44 of Fig. 2 uses channel parameters estimated by the channel estimator 38 to develop the SIR target. Performance information estimated by the performance estimator 42 (e.g., block error rate) may also be used by the SIR target generator 44 to develop the SIR target. By using channel parameters to develop the SIR target, the target is able to adapt quickly to changes in channel conditions before corresponding performance information has been measured."

The Specification makes clear that channel parameters from the channel estimator 38 do not include error rates, and therefore the "channel estimator to estimate channel parameters" recited in claim 1 does not estimate error rates. Dahlman does not show the "quality measure target generator to generate a quality measure target value for the communication apparatus using channel parameters estimated by said channel estimator" recited in claim 1 because the SIR target value of Dahlman is adjusted based on quality measurements such as error rates.

The applicants respectfully submit that Dahlman does not show all of the features recited in claim 1, and that claim 1 is in condition for allowance. Claims 2-4, 6-7, and 9-10 are dependent on claim 1, and recite further features with respect to claim 1. For reasons analogous to those stated above, and the features in the claims, the applicants respectfully submit that Dahlman does not show all of the features recited in claims 2-4, 6-7, and 9-10, and that claims 2-4, 6-7, and 9-10 are in condition for allowance.

Claims 11-14, 17-19, and 21-25 recite features similar to those recited in claim 1. For reasons analogous to those stated above, and the features in the claims, the applicant respectfully submits that Dahlman does not show all of the features recited in claims 11-14, 17-19, and 21-25, and that claims 11-14, 17-19, and 21-25 are in condition for allowance.

<sup>&</sup>lt;sup>4</sup> Specification, page 5, lines 16-20.

<sup>&</sup>lt;sup>5</sup> Specification, page 5, lines 13-16.

<sup>&</sup>lt;sup>6</sup> Specification, page 4, line 25 to page 5.

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Claims 30-34, 36, and 39 were rejected under 35 USC § 102(e) as being anticipated by Kanemoto et al. (U.S. 2002/0160721, Kanemoto). The applicants respectfully traverse.

The applicants respectfully submit that Kanemoto is not prior art under 35 USC §102(e). The above-identified application was filed on 17 December 2001, before Kanemoto was published as a U.S. Published Application. Kanemoto derives from a PCT application number PCT/JP01/01806, filed on 8 March 2001. A copy of WO 01/76103 A1 is submitted herewith in an Information Disclosure Statement. WO 01/76103 A1 is the WIPO publication of PCT application PCT/JP01/01806, and is published in Japanese.

The MPEP has set forth examination guidelines for applying references under 35 USC §102(e).<sup>7</sup> An international application that was not published in English cannot be used as a reference under 35 USC §102(e) as of its international filing date.<sup>8</sup> The international application from which Kanemoto claims priority was not published in English.

The applicants respectfully submit that Kanemoto is not prior art under 35 USC §102(e), and that claims 30-34, 36, and 39 are in condition for allowance.

# Rejections of Claims Under §103

Claims 22-29 were rejected under 35 USC § 103(a) as being unpatentable over Dahlman in view of Takano et al. (U.S. 2002/0061731, Takano). The applicants respectfully traverse.

Independent claim 22 recites a mobile communicator, comprising, among other elements, "a first quality measure target generator to generate a first quality measure target value for a first remote base station," "a second quality measure target generator to generate a second quality measure target value for a second remote base station," and "a site selection manager to select a remote base station." Independent claim 26 recites similar features. The remaining claims are dependent on claims 22 and 26.

The Office Action states that the elements 25 and 28 of Dahlman correspond to the claimed first and second quality measure target generators. However, 25 and 28 of Dahlman refer to a processor 25 and a SIR and quality measurement block 28 shown in a mobile station 110 in Figure 4. These are two different elements with different functions in the mobile station

<sup>&</sup>lt;sup>7</sup> MPEP 706.02(f)(1).

<sup>&</sup>lt;sup>8</sup> MPEP page 700-28, column 1, paragraph (2).

<sup>&</sup>lt;sup>9</sup> Office Action, page 5.

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110 of Dahlman, and do not correspond to the claimed first and second quality measure target generators. Dahlman does not show the elements alleged in the Office Action.

In addition, the MPEP states the following with regard to rejections under 35 USC § 103:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

A Federal Circuit opinion states that the suggestion or motivation to combine references and the reasonable expectation of success must both be found in the prior art.<sup>11</sup>

The Office Action states that:

"It would have been obvious .... to modify the communication apparatus of Dahlman et al. by performing handover based on quality measure target values, as taught by Takano et al. for the purpose of providing a communication signal for the mobile station that has the optimal clarity based upon the level of interference in the signal." <sup>12</sup>

The Office Action did not identify any prior art evidence as the source of this rationale for combining Dahlman and Takano, as is required by MPEP 2143. The Office Action is improperly using hindsight in combining Dahlman and Takano. The Office Action is also missing evidence of a reasonable expectation of success of this combination of Dahlman and Takano as is required by MPEP 2143.

The applicants respectfully submit that a *prima facie* case of obviousness of claims 22-29 has not been established in the final Office Action, and that claims 22-29 are in condition for allowance.

Claims 5, 15, and 20 were rejected under 35 USC § 103(a) as being unpatentable over Dahlman in view of Leung (U.S. 6,452,917). The applicants respectfully traverse.

Claims 5, 15, and 20 are variously dependent on independent claims 1, 11, and 17 discussed above. For reasons analogous to those stated above, and the features in the claims, the applicants respectfully submit that claims 5, 15, and 20 are in condition for allowance.

<sup>10</sup> MPFP 2143

<sup>&</sup>lt;sup>11</sup> MPEP 2143 citing *In re Vaeck*, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991).

<sup>&</sup>lt;sup>12</sup> Office Action, pages 5-6.

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## The Office Action states that:

"It would have been obvious .... to modify the communication apparatus of Dahlman et al. by estimating channel parameters based on a variation in symbol energy as taught by Leung to make a more accurate assessment of channel conditions based on channel statistics as they vary with rapid changes." <sup>13</sup>

The Office Action did not identify any prior art evidence as the source of this rationale for combining Dahlman and Leung, as is required by MPEP 2143. The Office Action is improperly using hindsight in combining Dahlman and Leung. The Office Action is also missing evidence of a reasonable expectation of success of this combination of Dahlman and Leung as is required by MPEP 2143.

The applicants respectfully submit that a *prima facie* case of obviousness of claims 5, 15, and 20 has not been established in the final Office Action, and that claims 5, 15, and 20 are in condition for allowance.

Claim 8 was rejected under 35 USC § 103(a) as being unpatentable over Dahlman in view of Almgren et al. (WO 01/20808, Almgren). The applicants respectfully traverse.

Claim 8 is dependent on independent claim 1 discussed above. For reasons analogous to those stated above, and the features in the claim, the applicants respectfully submit that claim 8 is in condition for allowance.

## The Office Action states that:

"It would have been obvious .... to modify the elements of the communication apparatus of Dahlman et al. by implementing them in a handheld communicator as taught by Almgren et al. to provide an improved power control method using quality indicators and a target value to the handheld communicator."

The Office Action did not identify any prior art evidence as the source of this rationale for combining Dahlman and Almgren, as is required by MPEP 2143. The Office Action is improperly using hindsight in combining Dahlman and Almgren. The Office Action is also

<sup>&</sup>lt;sup>13</sup> Office Action, page 6.

<sup>&</sup>lt;sup>14</sup> Office Action, page 7.

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missing evidence of a reasonable expectation of success of this combination of Dahlman and Almgren as is required by MPEP 2143.

The applicants respectfully submit that a *prima facie* case of obviousness of claim 8 has not been established in the final Office Action, and that claim 8 is in condition for allowance.

Claim 35 was rejected under 35 USC § 103(a) as being unpatentable over Kanemoto in view of Leung. The applicants respectfully traverse.

For the reasons stated above, the applicants respectfully submit that Kanemoto is not prior art under 35 USC §102(e), and that claim 35 is in condition for allowance.

Claim 38 was rejected under 35 USC § 103(a) as being unpatentable over Kanemoto in view of Almgren. The applicants respectfully traverse.

For the reasons stated above, the applicants respectfully submit that Kanemoto is not prior art under 35 USC §102(e), and that claim 38 is in condition for allowance.

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# **CONCLUSION**

The applicants respectfully submit that all of the pending claims are in condition for allowance, and such action is earnestly solicited. The Examiner is invited to telephone the below-signed attorney at 612-373-6973 to discuss any questions which may remain with respect to the present application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

LEV SMOLYAR ET AL.

By their Representatives,

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Date O September 2003

Rv

Robert E. Mates Reg. No. 35,271

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 20th day of September, 2005.

Name

Signature